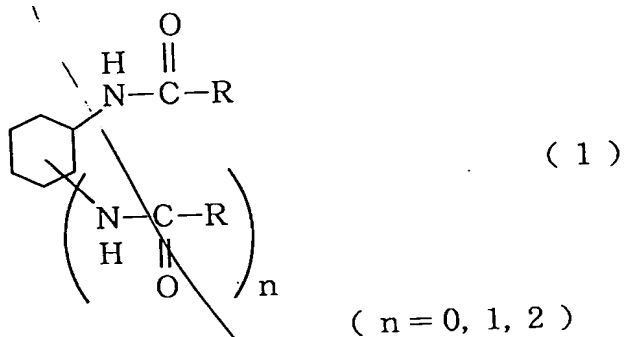


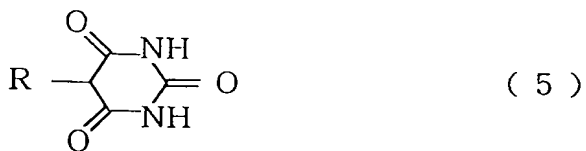
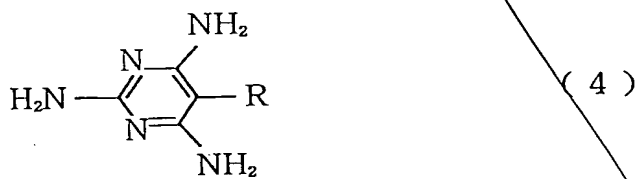
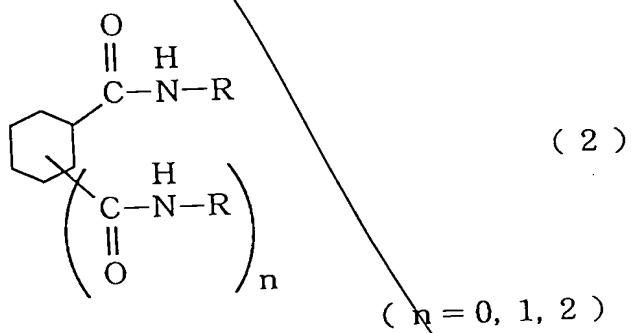
WHAT IS CLAIMED IS:

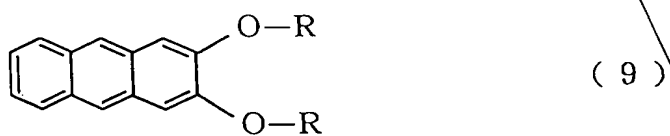
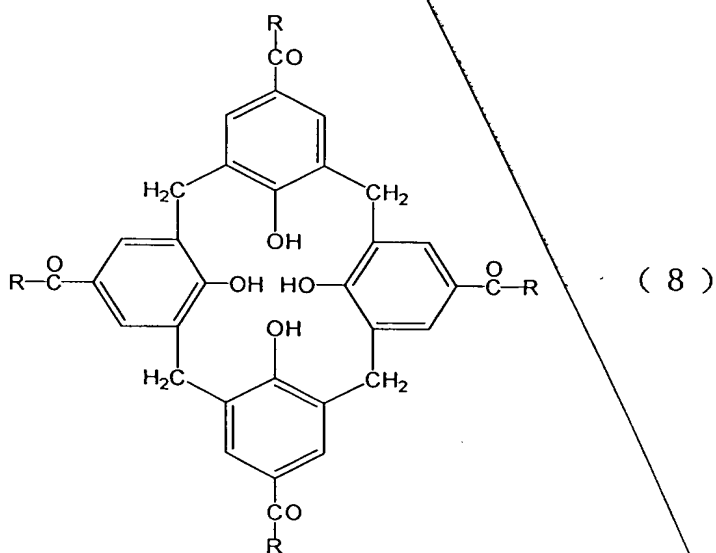
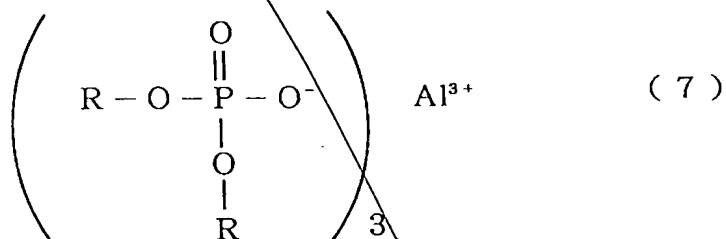
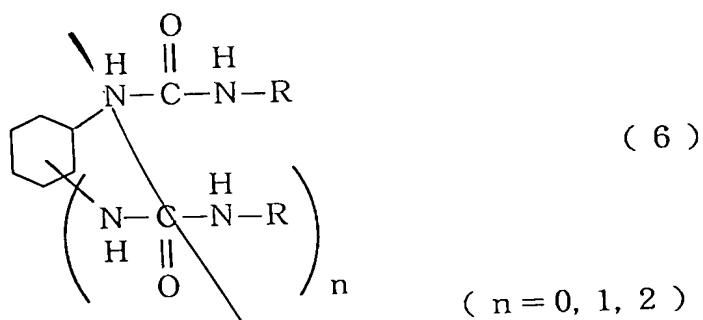
1. A gel electrolyte containing at least a gelling agent and a material of high ion conductivity being liquid at working temperature.
- 5 2. The gel electrolyte of claim 1, wherein said material of high ion conductivity is a salt being liquid at room temperature.
- 10 3. The gel electrolyte of claim 1, wherein said gelling agent is a self-assembling compound which gels forming a polymer associated body by the aid of an intermolecular force, such as hydrogen bonding, coordination bonding and the like.
- 15 4. The gel electrolyte of claim 3, wherein said self-assembling compound has at least one group, as the substituent showing capability of hydrogen bonding, selected from the group consisting of carbamate, amide, 20 urea, carboxyl, alkoxy, hydroxyl, phosphate, amino and ammonium groups.
- 25 5. The gel electrolyte of claim 3 or 4, wherein said self-assembling compound is selected from the group consisting of the compounds represented by the following formulae (1) to (26).



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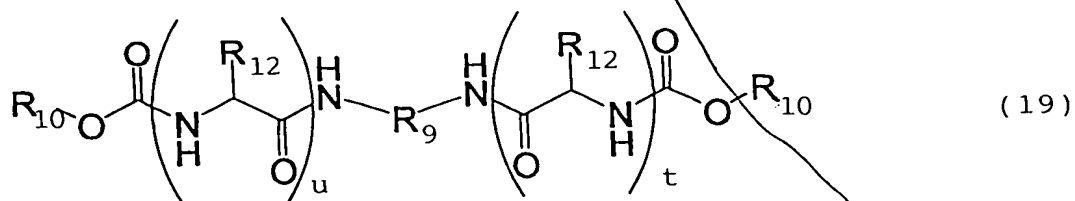
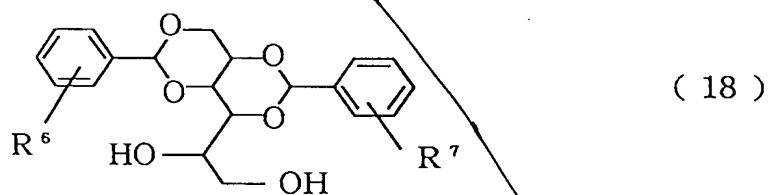
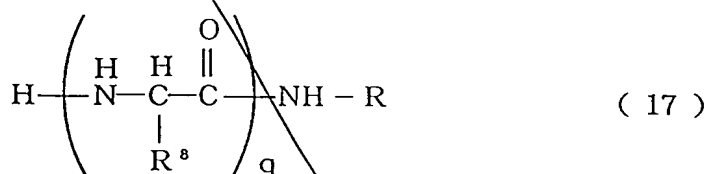
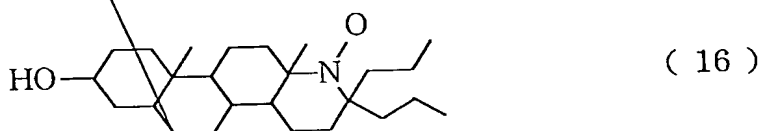
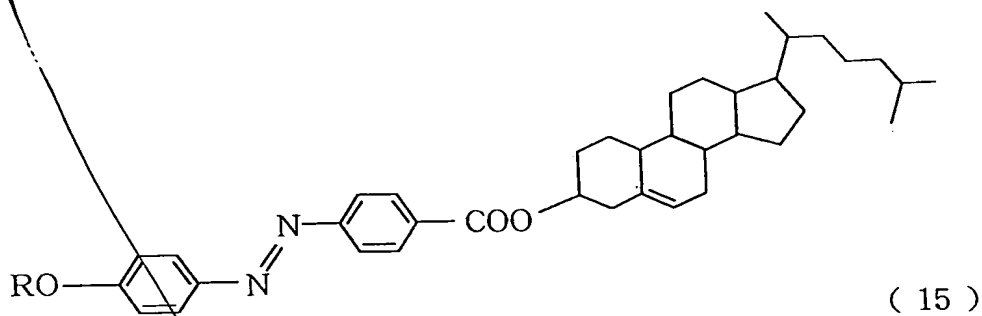
$$\backslash R^5 \text{ COOH} \quad (10)$$
$$\begin{array}{c} \text{O} \\ \parallel \\ \text{R} - \text{C} - \text{N} - \text{C} - \text{CONH} - \text{R}^1 \\ \quad \quad \quad | \\ \quad \quad \quad \text{H} \quad \text{CH}_2\text{CH}_2\text{CONH} - \text{R}^2 \end{array} \quad (11)$$
$$\begin{array}{c}
 \text{R}^1 \\
 \diagup \\
 \text{H} \\
 \diagdown \\
 \text{H}-\text{N} \\
 \diagup \\
 \text{O}=\text{C} \\
 \diagdown \\
 \text{O} \\
 \diagup \\
 \text{O}=\text{C} \\
 \diagdown \\
 \text{O} \\
 \diagup \\
 \text{H}-\text{N} \\
 \diagdown \\
 \text{H} \\
 \diagup \\
 \text{R}^2
 \end{array}
 \quad (12)$$



(13)

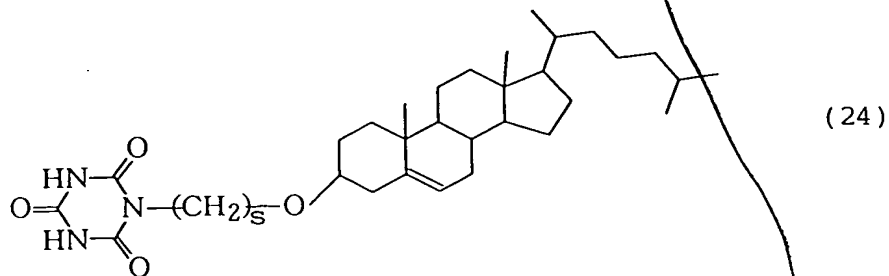
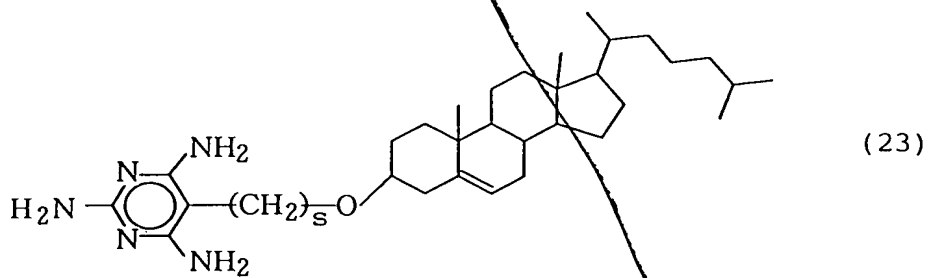
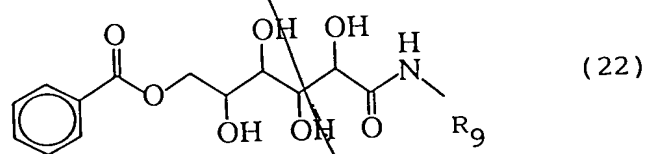
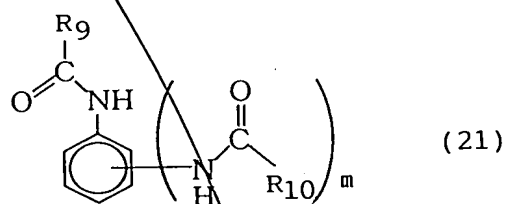
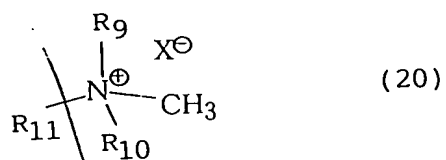
CC(C)C[C@H]1CC[C@@H]2[C@@]1(CC[C@H]3[C@H]2CC=C4[C@@]3(CC[C@@H](C4)OC(=O)CCOC5=CC=CC=C6C=CC=CC=C56)C)C

(14)



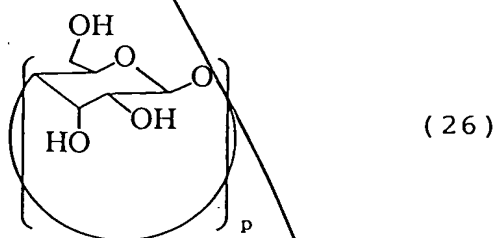
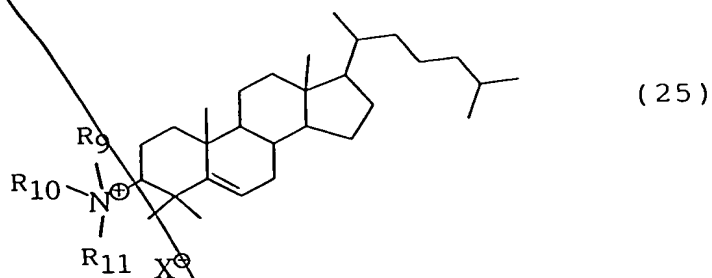
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Chemical structure

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wherein, R, R₁ and R₂ are each hydrogen, or a straight-chain or branched aliphatic hydrocarbon group having a carbon number of 1 to 29; R₃ is an amino acid monomer or dimer with a protected amino group; R₄ is an aliphatic hydrocarbon having a carbon number of 1 to 29 or an aryl group; R₅ is a straight-chain aliphatic group having a carbon number of 1 to 29 and being substituted with one hydroxyl group; R₆ and R₇ are each an aliphatic hydrocarbon group having a carbon number of 1 to 29 or an aryl group; R₈ is hydrogen, or an aliphatic hydrocarbon group having a carbon number of 1 to 5 or aryl group; n is 0, 1 or 2; q is an integer of 2 to 20; R₉, R₁₀ and R₁₁ are each hydrogen, or a straight-chain or branched aliphatic hydrocarbon group having a carbon number of 1 to 29; R₁₂ is a side chain of an amino acid,

23
all
or an alkyl or aryl group; X is a halogen; p is an
integer of 6 to 8; m is an integer of 0 to 5 and s is
an integer of 0 to 29, and u and t are an integer of 1
to 500.

23
all
6. A cell comprising an anode, an electrolyte and
a cathode, wherein said electrolyte is the gel
electrolyte of any one of claims 1 to 4.

10 7. An electrochromic element comprising a pair of
transparent electrodes between which an electrochromic
layer which develops color on reduction and a
transparent ionic conductor layer exist, wherein said
ionic conductor layer contains the gel electrolyte of
15 any one of claims 1 to 4.

all 23
all 35